

SCRI Research Programme

1999-2000

SERAD funded research programme showing: SERAD project number; Title (prefixed ROA for ROAMEd core-funded projects; FF for Flexible Fund projects); Scientific Project Leader. In addition to this list, there are research projects undertaken on behalf of various bodies, including other governmental bodies, commerce and levy boards.

SCR/444/95	ROA Low temperature stress in <i>Ribes</i> , <i>Rubus</i> and other woody genera	McNicol R J
SCR/445/95	ROA Collection and evaluation and genetic resources of <i>Rubus</i> , <i>Ribes</i> and <i>Fragaria</i>	McNicol R J
SCR/449/95	ROA Advanced information techniques for the study and management of vegetation systems	MacKerron D K L
SCR/452/95	ROA Genetic architecture of tetraploid potatoes and production of enhanced germplasm	Bradshaw J E
SCR/454/95	ROA Structure of soil microbial and faunal communities, their interaction with vegetation and the relationship to soil processes and health	Griffiths B S
SCR/456/95	ROA Genetics and ecophysiology of abiotic stress tolerance in <i>Hordeum vulgare</i> (barley) and <i>Arabidopsis thaliana</i>	Forster B P
SCR/462/96	ROA Molecular mechanisms of plant virus replication and movement and the effects of resistance genes on these processes, using cucumoviruses and tobamoviruses as contrasting model systems	Palukaitis P F
SCR/464/96	ROA Biochemical and molecular control of carbohydrate metabolism and the modification of starch structure in potato	Davies H V
SCR/471/96	ROA Mathematical analysis of dynamics and scaling in heterogeneous and hierarchially coupled systems I: the soil/microbe complex	Crawford J W
SCR/479/96	ROA Maintenance, improvement, evaluation and exploitation of biodiversity in germplasm collections of potato	Mackay G R
SCR/481/96	ROA Evaluation, improvement, maintenance and exploitation of biodiversity in germplasm collections of brassicas for improved pest resistance (particularly cabbage and turnip root flies) and nutritional value	Birch A N E
SCR/482/96	ROA Detection, identification, genetic variation and ecology of virus and insect, mite and nematode pests and virus vectors, especially of soft fruit crops, and strategies for their effective control	Jones A T
SCR/483/96	ROA Soft rot erwinias and blackleg disease: aetiology, epidemiology and pathogenicity, selection of resistant potato cultivars and their mechanisms of resistance	Lyon G D
SCR/487/96	ROA Mathematical analysis of dynamics and scaling in heterogeneous and hierarchially coupled systems II: complex biochemical networks	Crawford J W
SCR/494/97	ROA Genetic control of pathogenicity, host specificity and race structure at the molecular level in the fungal pathogens <i>Phytophthora infestans</i> , <i>Phytophthora fragariae</i> and related <i>Phytophthora</i> species	Duncan J M

SCR/495/97	ROA Transcriptional and post-transcriptional regulation of plant gene expression	Brown J W S
SCR/496/97	ROA Production of novel diagnostic reagents, in particular genetically engineered antibody-like proteins and investigation of their potential for use in research, biotechnology and diagnosis	Torrance L
SCR/497/97	ROA Studies on mechanisms of host gene-mediated and pathogen-derived transgene-mediated resistance to viruses to improve the deployment of new types of resistance for germplasm enhancement	Barker H
SCR/499/97	ROA Free radical processes in plants and plant-derived foods	Davies H V
SCR/501/97	ROA Develop and operate methods for the detection and quantification of genetic resistance to a wide range of economically important fungal and bacterial pathogens of potato	Bradshaw J E
SCR/508/98	ROA Cell biology of plant-virus interactions	Oparka K J
SCR/509/98	ROA Molecular dissections of plant viral movement proteins	Oparka K J
SCR/510/98	ROA Molecular mechanisms involved in the aphid transmission of luteoviruses, potyviruses and the nematode transmission of tobamoviruses	Mayo M A
SCR/512/98	ROA Produce and maintain pathogen-tested stocks of <i>Rubus</i> , <i>Ribes</i> and <i>Fragaria</i> germplasm and index for infection material imported into SCRI	Jones A T
SCR/513/98	ROA Gene expression and manipulation in barley	Machray G C
SCR/514/98	ROA Isolation and functional characterisation of genes important in the host-parasite interaction of plant parasitic nematodes including <i>Globodera</i> , <i>Meloidogyne</i> and <i>Xiphinema</i> spp.	Trudgill D L
SCR/518/98	ROA Towards the construction of a physical and functional map of the interval between GP21 and GP179 on potato linkage group V	Waugh R
SCR/520/98	ROA Mapping and isolation of <i>Rhynchosporium secalis</i> recognition and early signalling genes in barley	Newton A C
SCR/521/98	ROA Genetic modification of soft fruit crops and risk assessment for their introduction	Graham J
SCR/525/99	ROA Interactions between the structure of soil habitats and biological processes	Young I M
SCR/526/99	ROA Integrative mapping of the long arm of barley chromosome 5H	Machray G C
SCR/527/99	ROA Development of a graphical database for the visualisation of genotypic and phenotypic data in barley	Thomas W T B
SCR/528/99	ROA Use of an accelerated marker assisted selection scheme to introgress novel variation for economically important traits into cultivated barley	Thomas W T B
SCR/529/99	ROA Phenotypic optima in the maintenance of physiological and genetic diversity in plant communities	Squire G R
SCR/530/99	ROA Measurement of the natural abundances of the stable isotopes of nitrogen ($\delta^{15}\text{N}$) in ammonium of soils and natural waters	Handley L L
SCR/531/99	ROA Chemical strategies for the study of leaf surface waxes and toxic glucosides of potato, brassica and soft fruit in plant-insect interactions and the inter-relationships of toxic glucosides with product quality	Griffiths D W

SCR/532/99	ROA Plant membrane lipid compositions and stress, with respect to genetically modified <i>Arabidopsis</i> and rape with primary lipid defects and cold tolerance in blackcurrant	Dobson G
SCR/533/99	ROA Molecular and genetic studies of the basis of virulence/avirulence in plant parasitic nematodes	Phillips M S
SCR/534/99	ROA Isolation and functional analysis of plant genes involved in resistance responses to nematodes	Trudgill D L
SCR/488/96	FF Modelling soil-water/structure functions to assess the efficiency of pesticides in agricultural soils against pathogenic nematodes	Young I M
SCR/505/97	FF Molecular approaches to manipulate the development and composition of strawberry fruit	Davies H V
SCR/506/97	FF Use of stable isotope techniques to determine the origin, movement and effects of nitrate in the catchment area of the river Ythan	Handley L
SCR/516/97	FF Genetic mapping and molecular cloning of novel sources of resistance to <i>Globodera pallida</i>	Waugh R
SCR/522/98	FF Development of <i>Rubus</i> genotypes with transgenic resistance to raspberry bushy dwarf virus	Jones A T
SCR/523/98	FF Investigation of the mechanisms of disease induction and host-specificity in major bacterial and fungal potato pathogens	Birch P R J
SCR/524/98	FF Unravelling the pathways of protein transport in plant and animal cells using virus-based vectors	Oparka K J
SCR/535/99	FF Impacts of a conventional and an organic crop insecticide spray treatment on life history traits of two-spot ladybirds	Birch A N E
SCR/808/94	FF Development of molecular biological and physiological techniques in studies of the interaction between microbes, nutrient cycling and vegetation among a range of agriculturally important pastures, to enable scaling from microcosm to field	Ritz K
SCR/816/95	FF Phenotypic and genotypic bases of population dynamics in heterogeneous, species-rich grassland	Squire G
SCR/818/95	FF Genetic engineering of crop plants for resistance to insect and nematode pests: effects of transgene expression on animal nutrition and the environment	Robertson W M
SCR/821/96	FF Exploitation of novel and known lectins in agricultural and biological research - an interdisciplinary approach to improve crop protection and productivity, animal (including human) welfare and health	Stewart D
SCR/822/97	FF The application of the free-living nematode <i>C. elegans</i> to the development of control procedures for nematode parasites of animals and plants	Jones J
SCR/823/97	FF Significance of physical heterogeneity for scaling of solute chemistry in soils from fine scale to subcatchment	Crawford J W
SCR/824/97	FF Efficacy studies on a plant virus-based expression system and on alternative delivery routes for peptides and proteins with pharmaceutical, therapeutic and related uses for improving animal health, nutrition and welfare	Santa Cruz S

SCR/831/98	FF Insect-resistant transgenic plants in tri-trophic interactions: ecological, biochemical and molecular impact on aphidophagous ladybird predators	A N E Birch
SCR/832/99	FF Identification and assessment of nutritional relevance of antioxidant compounds from soft fruit species	Davies H V